Purpose:
In the interest of establishing and supporting an academic-wide consistent approach to laboratory safety culture, for the Students, Faculty, Staff and Community, the Academic Affairs Laboratory Safety Managements System (AALSMS) was created. This document highlights the key areas which make up this sustainable process, designed for the Colleges to use to achieve federal, state, and local laboratory regulatory compliance with all applicable occupational health, safety, and environmental matters.

Academic Laboratories provide opportunities for experimentation, observation, practice, and research. The following Colleges include laboratory activities: College of Arts and Sciences, College of Business, College of Education and Human Services, College of Engineering Technology, College of Health Professions, Michigan College of Optometry, and College of Pharmacy.

The Academic Affairs Laboratory Safety Management System is made up of the following parts as shown in the flow chart below.
Academic Affairs Division Leadership supports a methodical and thorough leadership approach for managing regulatory compliance in all teaching and research laboratories\(^1\). Listed below are the key roles and their responsibilities.

**Provost:**  
Oversight of LC\(^2\) for Division of Academic Affairs

**College Dean:**  
Oversight for LC\(^2\) for the college. This includes financial support and enforcement authority.

**College Chair/Director:**  
Oversight for LC\(^2\) for the departmental laboratories. Ensures laboratories have documentation, training, incident reporting continual improvement process and record keeping process in place.

**Laboratory Faculty (including Principal Investigator, Instructor and Laboratory Supervisor):**  
Implement the day-to-day LC\(^2\) in the laboratory. This includes documenting hazards assessment, modeling and reinforcing good practices to promote LC\(^2\) compliance.

**Staff:**  
Provide support for LC\(^2\) compliance.

**Academic Affairs Laboratory Safety Director (AALSD):**  
Provide technical support and assistance to academic laboratories for the management of Academic Affairs LC\(^2\) programs.

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\(^1\) Laboratory is any place providing the opportunity for experimentation, observation, or practice in a field of study.

\(^2\) LC: Laboratory Compliance refers to meeting federal, state, and local regulatory compliance requirements, within any remodeled, renovated, existing or new laboratory facility. Laboratory field work shall comply with laboratory compliance.
Hazard Analysis Program

**Hazard Analysis**: the process of recognizing hazards that may arise from activities/processes/equipment systems or the laboratory environment. The hazard analysis process begins with a hazard assessment. The assessment is designed to identify the hazards\(^3\) associated with the following categories: people performing the tasks/operations/processes; the items used in the tasks (equipment/instruments); the steps associated with the task (production); and the potential environmental impact on the community. The hazard assessment process is employed prior to starting new laboratory activities/operations/processes, obtaining a new piece of equipment/instrumentation or operating a new laboratory.

- **Describe the work activities/processes/operations/new equipment or laboratory environment.**
- **Conduct Hazard Assessment.**
- **Identify potential hazards associated with the tasks/processes/environment.**
- **Are the identified potential hazards in regulatory compliance?**
  - **No or unsure.** Contact Academic Affairs Laboratory Safety Director.
  - **Yes.** Proceed with work and monitor controls.

- **AALS Director will assist the Laboratory Faculty in determining hazards and means to control.**
- **Laboratory Faculty will implement the hierarchy of control measures. AALS Director will assist as needed.**
- **Laboratory Faculty will review the hierarchy of controls measures for effectiveness on a periodic bases. AALS Director will assist as needed.**

\(^3\)Hazard - any source of potential adverse health effect, harm or damage to people, property, process associated with the hazard, environment and reputation of the University.
The purpose of any written program is to provide a documented plan to achieve compliance with federal, state, and local regulations. They form the foundation for the Implementation Documents.

Implementation Documents describe *how* laboratories achieve compliance. These documents are written at the College level, with the assistance provided by the AALS Director. Each type of document appears below:

- SOPs (Standard Operating Procedure)
- Syllabus
- Protocols
- Flow Charts
- Notebook Studies
- Inspection/Check lists

**Documentation, Record Keeping, and Compliance Program**
Identified documentation shall be kept in each College Dean’s office.
Education and training supports the regulatory compliance.

The AALS Director will support College’s efforts to comply with federal, state and local statutes, regulations, and standards. The AALS Director will work in collaboration with the Colleges to develop training programs. Each College shall provide training in accordance with its particular laboratory needs.

Faculty/Staff that directly oversee the operations of the room/area operations

Documentation, Record Keeping, and Compliance Program
Identified documentation shall be kept in each College Dean’s office.

Staff that supplies support for the room or area operations

Students (non employees)

Documentation of the training should remain with the faculty who performed the training.
Academic Affairs Laboratory Safety Management System (AALSMS)

Incident Reporting and Investigation - Who

Event occurs

- Call 911
- Call the Dean's Office as soon as possible
- Start an incident report

Was a student involved?

- No
  - Were faculty and staff involved?
    - No
      - Were visitors involved?
        - No
          - End
        - Yes
          - Continue to Page 2 - “Students”
    - Yes
      - At the time of the event, was the student involved a student employee?
        - Yes
          - Continue to Page 2 - “Employees”
        - No
          - Continue to Page 2 - “Visitors”
  - Yes
    - Continue to Page 2 - “Students”

4 Event—Medical Emergencies, Flooding and Water Damage, Chemical Incident, Power Outage, Explosions, Motor Vehicle Accident, Tornadoes/Severe Weather, Evacuation or Fire
Incident Reporting and Investigation - Report Progress

Employees
- Report work related incident to supervisor
- Supervisor and injured employee complete Employee Incident Report
- Keep original form in Dean's Office
- Give copy to Employee
- Send copy to HR
- Send copy to Academic Affairs Laboratory Safety (AALS) and AALS will manage any follow-up investigation with the academic department.

Visitors
- Report work related incident to supervisor
- Area supervisor and injured student/visitor complete Injury/Incident Report (Non-employee)
- Keep original form in Dean's Office
- Send copy to Risk Management

Students
- Report work related incident to supervisor
- Area supervisor and injured student/visitor complete Injury/Incident Report (Non-employee)
- Keep original form in Dean's Office
- Send copy to Risk Management

4 Event-Medical Emergencies, Flooding and Water Damage, Chemical Incident, Power Outage, Explosions, Motor Vehicle Accident, Tornadoes/Severe Weather, Evacuation or Fire
Continuous Improvement

Conduct annual reviews of laboratory activities/processes/operations and facilities with federal, state, and local regulatory compliance requirements.

Laboratory Faculty (including Principal Investigator, Instructor, and Laboratory Supervisor.)

Review the implementation documentation that supports regulatory compliance. This review would include SOPs, Syllabus, Protocols, Flow Charts, Notebook Studies, Inspection/Check Lists.

If there is a field experience associated with the regulatory compliance, review field experience to ensure hazard assessments reflect current learning experiences.

For the physical location of the laboratory, conduct a hazard assessment.

Review Written Programs.

Did the review identify the need for changes?

No

Document findings.

End annual review.

Yes

Establish a plan to address and implement the changes.

End annual review.
Documentation and Record-Keeping Program

The purpose for a documentation and record keeping program is to demonstrate compliance with federal, state, and local statutes, regulations and standards.

The Academic Affairs Laboratory Safety Director shall identify records that shall be maintained by the Colleges to support compliance with federal, state, and local statutes, regulations and standards.

Roles and Responsibilities: Records documenting any changes in assigned roles and responsibilities in the Academic Affairs Laboratory Safety Management System Leadership.

Academic Affairs Laboratory Hazard Assessment: Records containing the name of the activity, processes, equipment, operations, systems, environment or location where the hazard assessment occurred, name of the person conducting the assessment, the outcome and corrective actions.

Written Program: Records showing documentation of yearly compliance review, and College internal reporting structure which directly impact the implementation of programs.

Education and Training: Records containing the name of the person who was trained, who provided the training, the topics covered, and date the training took place.

Incident Reporting and Investigation: Records containing information on incidents, causes of incidents and the corrective actions taken to eliminate or reduce the potential for recurrence.

Continual Improvement: Records documenting yearly compliance review plans to address only identified corrective actions.

Documentation, Record Keeping, and Compliance Program
Identified documentation shall be kept in each College Dean’s office.
Documentation and Record-Keeping Program

Definitions:

1. Laboratory is any place providing the opportunity for experimentation, observation, or practice in a field of study.

2. LC: Laboratory Compliance refers to meeting federal, state, and local laboratory regulatory compliance requirements, with any remodeled, renovated, existing or new laboratory facility. Laboratory field work shall comply with laboratory compliance.

3. Hazard - any source of potential adverse health effect, harm or damage to people, property, process associated with the hazard, environment and reputation of the University.


Related or Referred to Documents:

Refer to Academic Affairs Laboratory Safety written program.